

FILE 'REGISTRY' ENTERED AT 17:10:57 ON 02 SEP 2008
EXP ASPARAGINE/CN

L1 2 S E3

FILE 'HCAPLUS' ENTERED AT 17:11:13 ON 02 SEP 2008

L2 18606 S L1
L3 1 S DISIALOUNDECA?
L4 228020 S FATTY ACID
L5 0 S L2 AND L3 AND L4
L6 253 S L2 AND L4
L7 48927 S SIAL?
L8 1 S L6 AND L7
L9 49425 S SIAL? OR DISIAL?
L10 1 S L2 AND L4 AND L9
L11 167 S L2 AND L9
L12 134 S L11 AND (PY<2004 OR AY<2004 OR PRY<2004)
L13 138568 S AMIDE
L14 2 S L12 AND L13

FILE 'HCAPLUS' ENTERED AT 17:29:03 ON 02 SEP 2008

L15 4664798 S ACID
L16 92 S L12 AND L15

FILE 'HCAPLUS' ENTERED AT 17:30:17 ON 02 SEP 2008

L17 157350 S CAPRIC OR LAURIC OR MYRISTIC OR PALMITIC OR STEARIC OR ARACHI
L18 0 S L16 AND L17

FILE 'HCAPLUS' ENTERED AT 17:30:38 ON 02 SEP 2008

L19 0 S L12 AND L17

=> file registry
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

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STRUCTURE FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1
DICTIONARY FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1

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TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when
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REGISTRY includes numerically searchable data for experimental and
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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> exp asparagine/cn

E1	1	ASPARAGINASE/GLUTAMINASE (SALINISPORA TROPICA STRAIN CNB-440)/CN
E2	1	ASPARAGINASE/GLUTAMINASE (THIOMICROSPIRA CRUNOGENA STRAIN XCL-2)/CN
E3	2 -->	ASPARAGINE/CN
E4	1	ASPARAGINE (GLUTAMINE) SYNTHETASE/CN
E5	1	ASPARAGINE -- TRNA LIGASE (PLASMODIUM FALCIPARUM STRAIN 3D7 GENE PFB0525W)/CN
E6	1	ASPARAGINE ACID/CN
E7	1	ASPARAGINE AMIDE/CN
E8	1	ASPARAGINE AMIDE HYDROBROMIDE/CN
E9	1	ASPARAGINE AMIDOHYDROLASE (DIROFILARIA IMMITIS CLONE L3MC4)/CN
E10	1	ASPARAGINE AMINOTRANSFERASE/CN
E11	1	ASPARAGINE ANHYDRIDE/CN
E12	1	ASPARAGINE BENZYL ESTER HYDROCHLORIDE/CN

=> s e3

L1 2 ASPARAGINE/CN

=> file hcaplus
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
5.61	5.82

FILE 'HCAPLUS' ENTERED AT 17:11:13 ON 02 SEP 2008
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FILE COVERS 1907 - 2 Sep 2008 VOL 149 ISS 10
FILE LAST UPDATED: 1 Sep 2008 (20080901/ED)

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l1
L2      18606 L1

=> s disialoundeca?
L3      1 DISIALOUNDECA?

=> s fatty acid
      408232 FATTY
      4664798 ACID
L4      228020 FATTY ACID
      (FATTY(W)ACID)

=> s l2 and l3 and l4
L5      0 L2 AND L3 AND L4

=> s l2 and l4
L6      253 L2 AND L4

=> s sial?
L7      48927 SIAL?

=> s l6 and l7
L8      1 L6 AND L7

=> d l8 ti absbib
'ABSBIB' IS NOT A VALID FORMAT FOR FILE 'HCAPLUS'
```

The following are valid formats:

```
ABS ----- GI and AB
ALL ----- BIB, AB, IND, RE
APPS ----- AI, PRAI
BIB ----- AN, plus Bibliographic Data and PI table (default)
CAN ----- List of CA abstract numbers without answer numbers
CBIB ----- AN, plus Compressed Bibliographic Data
CLASS ----- IPC, NCL, ECLA, FTERM
DALL ----- ALL, delimited (end of each field identified)
DMAX ----- MAX, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data
```

FBIB ----- AN, BIB, plus Patent FAM
 IND ----- Indexing data
 IPC ----- International Patent Classifications
 MAX ----- ALL, plus Patent FAM, RE
 PATS ----- PI, SO
 SAM ----- CC, SX, TI, ST, IT
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
 SCAN must be entered on the same line as the DISPLAY,
 e.g., D SCAN or DISPLAY SCAN)
 STD ----- BIB, CLASS

 IABS ----- ABS, indented with text labels
 IALL ----- ALL, indented with text labels
 IBIB ----- BIB, indented with text labels
 IMAX ----- MAX, indented with text labels
 ISTD ----- STD, indented with text labels

 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels

 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations

 HIT ----- Fields containing hit terms
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 HITSEQ ----- HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.
 ENTER DISPLAY FORMAT (BIB):ti abs bib

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN
 TI The glycan structure of albumin Redhill, a glycosylated variant of human serum albumin
 AB Although human serum albumin is synthesized without carbohydrate, glycosylated variants of the protein can be found. We have determined the structure of the glycan bound to the double-mutant albumin Redhill (-1 Arg, 320 Ala-Thr). The oligosaccharide was released from the protein using anhydrous hydrazine, and its structure was investigated using neuraminidase and a reagent array anal. method, which is based on the use of specific exoglycosidases. The glycan was shown to be a disialylated biantennary complex type oligosaccharide N-linked to 318 Asn. However, a

minor part (11 mol%) of the glycan was without sialic acid. The structure is principally the same as that of glycans bound to two other types of glycosylated albumin variants. Glycosylation can affect, for example, the fatty acid binding properties of albumin. Taking the present information into account, it is apparent that different effects on binding are caused not by different glycan structures but by different locations of attachment, with the possible addition of local conformational changes in the protein mol.

AN 2001:884107 HCAPLUS <<LOGINID::20080902>>
 DN 136:179567
 TI The glycan structure of albumin Redhill, a glycosylated variant of human serum albumin
 AU Kragh-Hansen, Ulrich; Donaldson, David; Jensen, Poul Henning
 CS Department of Medical Biochemistry, University of Aarhus, Aarhus, DK-8000, Den.
 SO Biochimica et Biophysica Acta, Protein Structure and Molecular Enzymology (2001), 1550(1), 20-26
 CODEN: BBAEDZ; ISSN: 0167-4838
 PB Elsevier B.V.
 DT Journal
 LA English
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 17:10:48 ON 02 SEP 2008)

FILE 'REGISTRY' ENTERED AT 17:10:57 ON 02 SEP 2008
 EXP ASPARAGINE/CN

L1 2 S E3

FILE 'HCAPLUS' ENTERED AT 17:11:13 ON 02 SEP 2008

L2 18606 S L1
 L3 1 S DISIALOUNDECA?
 L4 228020 S FATTY ACID
 L5 0 S L2 AND L3 AND L4
 L6 253 S L2 AND L4
 L7 48927 S SIAL?
 L8 1 S L6 AND L7

=> log hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	8.29	14.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

SESSION WILL BE HELD FOR 120 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 17:12:14 ON 02 SEP 2008

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 17:26:45 ON 02 SEP 2008
FILE 'HCAPLUS' ENTERED AT 17:26:45 ON 02 SEP 2008
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.29	14.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

=> s sial? or disial?
48927 SIAL?
1174 DISIAL?
L9 49425 SIAL? OR DISIAL?

=> s l2 and l4 and l9
L10 1 L2 AND L4 AND L9

=> s l2 and l9
L11 167 L2 AND L9

=> s l11 and (PY<2004 or AY<2004 or PRY<2004)
24009542 PY<2004
4785121 AY<2004
4256259 PRY<2004
L12 134 L11 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> s amide
L13 138568 AMIDE

=> s l12 and l14
L14 NOT FOUND
The L-number entered could not be found. To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l12 and l13
L14 2 L12 AND L13

=> d l14 1-2 ti abs bib

L14 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Characterization of N-linked oligosaccharides attached to recombinant
human antithrombin expressed in the yeast *Pichia pastoris*
AB We studied the structures of four N-linked oligosaccharide chains of the
recombinant human antithrombin (rAT) expressed in the yeast *Pichia*
pastoris. RAT was fully glycosylated at Asn 96 and Asn 155, whereas the
glycosylation on Asn 135 and Asn 192 was partial. The glycosylation level
on Asn 135 was only 12% and this reduction is assumed to be one of the reasons
for a higher heparin-binding affinity of rAT than plasma-derived human
antithrombin (pAT). In order to determine the sizes and electrostatic charges
of the N-linked oligosaccharides, rAT was treated with PNGase F, and the
reduced ends were labeled by pyridylamination followed by anal. using
anion exchange and amide adsorption columns. The N-linked
oligosaccharides were 78% neutral and 22% phosphomannosylated. The
neutral oligosaccharides were thought to be Man9-12GlcNAc2 as their major

components. The phosphomannosylated oligosaccharides were then subjected to mild acid hydrolysis and/or digestion with alkaline phosphatase, and their charge shifts were analyzed by the affinity to an anion exchange column. Among phosphomannosylated oligosaccharides, monophosphate diester type was predominant, whereas neg. charged diphosphate diester and monophosphate monoester types were minor components. The mannose residues at the non-reducing end(s) of Man9-12GlcNAc2 were phosphomannosylated or phosphorylated and these are the major components. Because rAT is less neg. charged than pAT, which has disialyl biantennary N-glycans, it might be less repulsive to pentasaccharide-bearing anticoagulant active heparan sulfate proteoglycan mols. exposed on the surface of the damaged vascular vessels.

AN 2002:813772 HCAPLUS <<LOGINID::20080902>>

DN 138:51890

TI Characterization of N-linked oligosaccharides attached to recombinant human antithrombin expressed in the yeast *Pichia pastoris*

AU Hirose, Masaaki; Kameyama, Shoji; Ohi, Hideyuki

CS Protein Research Laboratory, Pharmaceutical Research Division, Mitsubishi Pharma Corporation, Osaka, 573-1153, Japan

SO Yeast (2002), 19(14), 1191-1202

CODEN: YESTE3; ISSN: 0749-503X

PB John Wiley & Sons Ltd.

DT Journal

LA English

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Oligosaccharide units of rabbit immunoglobulin G. Multiple carbohydrate attachment sites

AB The carbohydrate structure of rabbit immunoglobulin G isolated from pooled serums was determined. Amino sugar anal. of fragments of the mol. showed 3 oligosaccharides located at separate sites on the H-chain and the corresponding glycopeptides were isolated. The average composition of the C1-oligosaccharide, present on .apprx.15% of the H-chains, was 2 glucosamine, 2 mannose, and 1 galactose residues; the carbohydrate was coupled through the amide group of asparagine in a peptide containing asparagine, glycine, and threonine within the Fd fragment of the mol. The average composition of the C2-oligosaccharide, present on .apprx.40%

of the H-chains, was 1 galactosamine, 1 galactose, and either 1 or 2 sialic acid residues; it was attached glycosidically to the OH group of threonine in a peptide Ser-Lys-Pro-Thr-Cys-Pro-Pro-Pro-Glu-Leu in the hinge region of the mol. The average composition of the

C3-oligosaccharide, present in all the H-chains, was 5 glucosamine, 2 galactose, 5 mannose, 1 fucose, and 1 sialic acid residue; it was linked through the amide group of asparagine in a peptide Gln-Gln-Phe-Asn-Ser-Thr-Ile-Arg within the Fc fragment of the mol.

AN 1972:459855 HCAPLUS <<LOGINID::20080902>>

DN 77:59855

OREF 77:9913a,9916a

TI Oligosaccharide units of rabbit immunoglobulin G. Multiple carbohydrate attachment sites

AU Fanger, M. W.; Smyth, D. G.

CS Natl. Inst. Med. Res., London, UK

SO Biochemical Journal (1972), 127(5), 757-65

CODEN: BIJOAK; ISSN: 0264-6021

DT Journal

LA English

=> file stnguisse
'STNGUISE' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'HCAPLUS'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available. If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.

=> file stnguide		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	19.49	25.31
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.40	-2.40

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FILE CONTAINS CURRENT INFORMATION.
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=> file hcaplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.06	25.37
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.40

FILE 'HCAPLUS' ENTERED AT 17:29:03 ON 02 SEP 2008
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reclassification data for the second quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s acid
L15 4664798 ACID

=> s l12 and l15
L16 92 L12 AND L15

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.69	28.06
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.40

FILE 'STNGUIDE' ENTERED AT 17:29:16 ON 02 SEP 2008
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 29, 2008 (20080829/UP).

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.12	28.18
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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=> s capric or lauric or myristic or palmitic or stearic or arachic or behenic or oleic

6255 CAPRIC
 20076 LAURIC
 16240 MYRISTIC
 42544 PALMITIC
 76090 STEARIC
 547 ARACHIC
 5138 BEHENIC
 71101 OLEIC
 L17 157350 CAPRIC OR LAURIC OR MYRISTIC OR PALMITIC OR STEARIC OR ARACHIC
 OR BEHENIC OR OLEIC

=> s l16 and l17

L18 0 L16 AND L17

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.69	30.87
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.40

FILE 'STNGUIDE' ENTERED AT 17:30:19 ON 02 SEP 2008
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FILE CONTAINS CURRENT INFORMATION.
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=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.06	30.93
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-2.40

FILE 'HCAPLUS' ENTERED AT 17:30:38 ON 02 SEP 2008
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=> s l12 and l17

L19 0 L12 AND L17